

## PREAMBLE AIDED SYNCHRONIZATION

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### Abstract of the Disclosure

The repetitive structure of a preamble signal is exploited to enhance timing synchronization performance and frame start detection performance under adverse channel conditions. Received values are cross-correlated in time against a known noise-free version of the preamble. The presence of peaks in the cross-correlation output indicates presence of a frame. The peak locations provide symbol timing. Further cross-correlation processing and/or non-linear processing can be used to enhance the signal to noise ratio of the peaks.

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